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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,303	10/29/2001	James H. Stephens JR.	263550US8	1293

22850 7590 05/12/2008

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EXAMINER	
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ART UNIT	PAPER NUMBER
2144	

NOTIFICATION DATE	DELIVERY MODE
05/12/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/045,303	STEPHENS, JAMES H.	
	Examiner	Art Unit	
	PELING A. SHAW	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-13 and 15-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 5-13 and 15-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Amendment received on 02/07/2008 has been entered into record. Claims 1, 3, 5, 11-13 and 15-20 are amended. Claims 2, 4 and 14 are canceled. Claims 1, 3, 5-13 and 15-20 are currently pending.

2. Applicant's submission filed on 09/04/2007 was entered. Claims 2 and 11-20 were amended.

3. Amendment received on 02/06/2007 was entered into record. Claims 11-20 were amended.

4. Applicant had submitted an Appeal Brief on 10/13/2006 together with amended claim language changes on claims 11-20 in an effort to reduce issues with respect to 35 USC § 101. Examiner had reviewed the amended claim changes and found that the amended claim changes did touch upon the issues of claims 11-20 rejection under 35 USC § 101. This necessitated an issue of non-final action dated 01/16/2007.

5. Amendment received on 12/07/2005 was entered. Claims 1, 4, 5, 11-13, 16, 17 and 20 were amended.

Priority

6. This application has no priority claim made. The filing date is 10/29/2001.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art

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to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5-6, 11-13, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan et al. (US 6505244 B1), hereinafter referred as Natarajan, in view of Weisman et al. (US 7171475 B2), hereinafter Weisman.

a. Natarajan shows (claim 1) a method for modeling video conferencing network reliability (column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application), the method comprising: obtaining historical data for multiple video conferences (Fig. 17, item 1706: reports respective number of packets dropped to data store, 1722: wait specified time interval; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 30, lines 44-55; reports respective number of packets dropped to data store; column 31, lines 6-12: feedback resumes at 1706; column 30, lines 48-57: quality monitor may wait for a specified time interval before re-evaluating the CIR policy); storing said historical data in a call history table

(Fig. 2 and 15; column 7, lines 12-43; column 25 line 27-column 26-line 48: feedback-based adaptive network, report network information to a centralized data storage entity); executing a modeling algorithm that produces a model representing the historical data (Fig. 17, item 1718 and 1720: evaluate effectiveness of current policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application), which includes executing a decision tree algorithm (column 14, lines 5-50; column 15, lines 1-37: decision tree); analyzing the model to identify characteristics associated with undesirable outcomes for the video conferences (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-

column 30, line 33: video conference application); configuring a video conferencing network to avoid at least one of the identified characteristics associated with undesirable outcomes (Fig. 17, item 1708, 1710, 1712, 1714: notify and update network elements; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application); and conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 29, line 37-column 30, line 33: video conference application). Natarajan does not explicitly show (claim 1) said historical data including video conferencing equipment vendor or model identification information. However Natarajan does show (column 5, lines 38-53) network elements may be

owned and/or managed by different service providers and (column 14, lines 20-32) a network equipment may be manufactured by different vendors.

b. Weisman shows (column 42, lines 42-46) using UPnP to implement logical device for discovery, description, control, event management and presentation; and (column 43, lines 33-37) UPnP description includes vendor-specific information like model and manufacture information in an analogous art for the purpose of providing a device hosting framework.

c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Natarajan's functions of policy engine which supports application specific plug-ins for enforcing policies in a feedback-based, adaptive data network with Weisman's functions of using UPnP for device description, control and event management.

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d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to distinguish network elements from different vendors with different model information as per Weisman's teaching in modeling and analyzing video conference performance Natarajan (column 29, lines 38-58: feedback-based adaptive video conference application) and Weisman (column 26, lines 32-52: video conference system; column 42, lines 42-46: using UPnP to discover, describing, control, event managing and presentation)'s teaching.

e. Regarding claim 5, Natarajan shows further comprising: updating the historical data to create new historical data that includes values representing characteristics of the new video conference (Fig. 15; column7, lines 12-43: feedback-based adaptive

network, report network information to a centralized data storage entity; Fig. 17, item 1706: reports respective number of packets dropped to data store, 1722: wait specified time interval; column 30, lines 44-55; reports respective number of packets dropped to data store; column 31, lines 6-12: feedback resumes at 1706); executing the modeling algorithm to produce a new model representing the new historical data (Fig. 17, item 1718 and 1720: evaluate effectiveness of current policy; column 31, lines 6-12: feedback resumes at 1706; column 30, lines 48-57: quality monitor may wait for a specified time interval before re-evaluating the CIR policy); analyzing the new model to produce a result (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level); and reconfiguring the video conferencing network according to the result (Fig. 17, item 1708, 1710, 1712, 1714: notify and update network elements; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level).

f. Regarding claim 6, Natarajan shows further comprising: evaluating the model to determine whether the model provides a desired level of efficacy (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43;

implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level); and in response to determining that the model does not provide a desired level of efficacy, using a different modeling algorithm to produce a different model (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 30, lines 48-57: quality monitor may wait for a specified time interval before re-evaluating the CIR policy).

g. Regarding claim 11, Natarajan shows a computer storage medium (claim 9: computer readable medium having computer code) storing instructions, which when executed by a computing device, cause the computing device to perform functions comprising: obtaining historical data for multiple video conferences (Fig. 17, item 1706: reports respective number of packets dropped to data store, 1722: wait specified time interval; column 30, lines 44-55; reports respective number of packets dropped to data store; column 31, lines 6-12: feedback resumes at 1706; column 30, lines 48-57: quality monitor may wait for a specified time interval before re-evaluating the CIR policy); storing said historical data in a call history table (Fig. 2 and 15; column 7, lines 12-43; column 25 line 27-column 26-line 48: feedback-based adaptive network,

report network information to a centralized data storage entity); executing a modeling algorithm that produces a model representing the historical data (Fig. 17, item 1718 and 1720: evaluate effectiveness of current policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks), which includes executing a decision tree algorithm (column 14, lines 5-50; column 15, lines 1-37: decision tree); analyzing the model to identify characteristics associated with undesirable outcomes for the video conferences (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application); configuring a video conferencing network to avoid at least one of the identified characteristics associated with undesirable outcomes (Fig. 17, item 1708, 1710, 1712, 1714: notify and update network elements; column 2, line 15-43; implementing a feedback-based data

network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application); and conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 29, line 37-column 30, line 33: video conference application). Weisman shows (column 42, lines 42-46) using UPnP to implement logical device for discovery, description, control, event management and presentation; and (column 43, lines 33-37) UPnP description includes vendor-specific information like model and manufacture information.

h. Regarding claim 12, Natarajan shows wherein the functions further comprise: outputting results that reveal at least one of the opportunities for improving reliability of the video conferencing network (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based

data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks), such that a user can reconfigure the video conferencing network, based on the results, to improve reliability of the video conferencing network (Fig. 17, item 1708, 1710, 1712, 1714: notify and update network elements; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks).

i. Regarding claim 13, Natarajan shows wherein the functions further comprise: analyzing the model to identify the one or more opportunities for improving reliability of the video conferencing network (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks); and automatically reconfiguring the video conferencing network, based on the identified opportunities, to improve reliability of

the video conferencing network (Fig. 17, item 1708, 1710, 1712, 1714: notify and update network elements; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level).

j. Regarding claim 16, Natarajan shows wherein the functions further comprise: updating the historical data to create new historical data that includes values representing characteristics of a new video conference (Fig. 15; column7, lines 12-43: feedback-based adaptive network, report network information to a centralized data storage entity; Fig. 17, item 1706: reports respective number of packets dropped to data store, 1722: wait specified time interval; column 30, lines 44-55; reports respective number of packets dropped to data store; column 31, lines 6-12: feedback resumes at 1706); executing the modeling algorithm to produce a new model representing the new historical data (Fig. 17, item 1718 and 1720: evaluate effectiveness of current policy; column 31, lines 6-12: feedback resumes at 1706; column 30, lines 48-57: quality monitor may wait for a specified time interval before re-evaluating the CIR policy); analyzing the new model to produce a result (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level); and reconfiguring the video conferencing

network according to the result to improve reliability of the video conferencing network (Fig. 17, item 1708, 1710, 1712, 1714: notify and update network elements; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level).

k. Regarding claim 20, Natarajan shows a data processing system (column 14, lines 20-32: stand alone device) for modeling video conferencing network reliability (column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application), the data processing system comprising: one or more processing units (column 14, lines 20-32: includes CPU); a computer storage medium storing instructions, which when executed by the one or more processing units, causes the one or more processing units to perform functions including (claim 9: computer readable medium having computer code): obtaining historical data for multiple video conferences (Fig. 17, item 1706: reports respective number of packets dropped to data store, 1722: wait specified time interval; column 30, lines 44-55; reports respective number of packets dropped to data store; column 31, lines 6-12: feedback resumes at 1706; column 30, lines 48-57: quality monitor may wait for a specified time interval before re-evaluating the CIR policy); storing said historical data in a call history table (Fig. 2 and 15; column 7, lines 12-43;

column 25 line 27-column 26-line 48: feedback-based adaptive network, report network information to a centralized data storage entity); and executing a modeling algorithm that produces a model representing the historical data (Fig. 17, item 1718 and 1720: evaluate effectiveness of current policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks); and which includes executing a decision tree algorithm (column 14, lines 5-50; column 15, lines 1-37: decision tree); analyzing the model to identify characteristics associated with undesirable outcomes for the video conferences (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application); configuring a video conferencing network to avoid at least one of the identified characteristics associated with undesirable outcomes (Fig. 17, item 1708, 1710, 1712, 1714: notify and update

network elements; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application); and conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 29, line 37-column 30, line 33: video conference application). Weisman shows (column 42, lines 42-46) using UPnP to implement logical device for discovery, description, control, event management and presentation; and (column 43, lines 33-37) UPnP description includes vendor-specific information like model and manufacture information.

Together Natarajan and Weisman disclosed all limitations of claims 1, 5-6, 11-13, 16 and 20. Claims 1, 5-6, 11-13, 16 and 20 are rejected under 35 U.S.C. 103(a).

8. Claims 3, 7-10, 15 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan, Weisman and further in view of Evans (US 5694524 A), hereinafter referred as Evans.

a. Natarajan and Weisman have shown claims 1 and 11 as above. Neither Natarajan nor Weisman shows (claim 3) wherein the operation of executing a decision tree algorithm comprises executing an ID3-based algorithm.

b. Evans shows (claim 3) wherein the operation of executing a decision tree algorithm comprises executing an ID3-based algorithm (column 9, line 12-19: C4.5 is based upon ID3 per Wikipedia) in an analogous art for the purpose of system and method for identifying conditions leading to a particular result in a multi-variant system.

c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Natarajan's functions of policy engine which supports application specific plug-ins for enforcing policies in a feedback-based, adaptive data network with Weisman's functions of using UPnP for device description, control and event management and Evans' functions of using decision tree and training data set, particularly ID3 extension C4.5 algorithm.

d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to use ID3 based decision tree algorithm per Evans ' teaching and be able to distinguish network elements from different vendors with different model information as per Weisman's teaching in modeling and analyzing system issue as per Evans (column 1, lines 6-9: identify conditions lead to a particular result)'s teaching, including video conference performance per Natarajan (column 29,

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lines 38-58: feedback-based adaptive video conference application) and Weisman (column 26, lines 32-52: video conference system; column 42, lines 42-46: using UPnP to discover, describing, control, event managing and presentation)'s teaching.

e. Regarding claim 7, Evans shows wherein: the method further comprises building a training set from the historical data (column 1, line 51-column 2, line 13; column 2, line 42-58: using training sets for heuristic classification;); the operation of executing the modeling algorithm comprises applying the modeling algorithm to the training set (column 1, line 51-column 2, line 13; column 2, line 42-58: developing qualitative model using training records); and the operation of analyzing the model comprises: deriving a rule set from the model (column 1, line 51-column 2, line 29; column 2, line 42-58: use machine induction rule and training data in developing qualitative model). Natarajan shows the operation of analyzing the model comprises: analyzing the rule set to identify the characteristics associated with undesirable outcomes for the video conferences (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 14, lines 51-59: specific sets of rules for analyzing specific information from selected network elements).

f. Regarding claim 8, Natarajan shows wherein: the historical data includes attribute values for attributes of each video conference and an outcome value representing an

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outcome for each video conference (column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 29, line 37-column 30, line 33: video conference application); and the operation of applying the modeling algorithm to the training set comprises: using the outcome values as categorical attributes for the modeling algorithm (column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level); and using the attribute values as non-categorical attributes for the modeling algorithm (column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level).

g. Regarding claim 9, Natarajan and Evan shows obtaining historical data for multiple video conferences as per claim 1; building a training data for multiple video conferences and executing the modeling algorithms as per claim 7. Natarajan has particularly shown (column 6, lines 49-65) provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network

element level; column 29, line 37-column 30, line 33: video conference application. Weisman shows (column 42, lines 42-46) using UPnP to implement logical device for discovery, description, control, event management and presentation; and (column 43, lines 33-37) UPnP description includes vendor-specific information like model and manufacture information.

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h. Regarding claim 10, Natarajan shows wherein: the training set includes values representing a first set of attributes (Fig. 17, item 1706: reports respective number of packets dropped to data store; column 30, lines 44-55; reports respective number of packets dropped to data store; column 31, lines 6-12: feedback resumes at 1706; column 30, lines 48-57: quality monitor may wait for a specified time interval before re-evaluating the CIR policy); and the method further comprises: evaluating the model to determine whether the model provides a desired level of efficacy (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks); in response to determining that the model does not provide a desired level of efficacy, building a different training set that includes a different set of attributes (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor

characteristics of various aspects of the network and adapt to changing network conditions); and applying the modeling algorithm to the different training set to produce a different model (Fig. 17, item 1708, 1710, 1712, 1714: notify and update network elements; column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions ; column 6, lines 49-65: provide a network model to accommodate multi-variable nature of networks; column 30, lines 48-57: quality monitor may wait for a specified time interval before re-evaluating the CIR policy).

i. Regarding claim 15, Evans shows wherein: the executing the decision tree algorithm comprises executing an ID3-based algorithm (column 9, line 12-19: C4.5 is based upon ID3 per Wikipedia).

j. Regarding claim 17, Evans shows wherein the functions further comprise: building a training set from the historical data (column 1, line 51-column 2, line 13; column 2, line 42-58: using training sets for heuristic classification;); executing the modeling algorithm by applying the modeling algorithm to the training set (column 1, line 51-column 2, line 13; column 2, line 42-58: developing qualitative model using training records); and deriving a rule set from the model (column 1, line 51-column 2, line 29; column 2, line 42-58: use machine induction rule and training data in developing qualitative model). Natarajan shows that the one or more opportunities for improving reliability of a video conferencing network can be identified with the rule set (Fig. 17, item 1720, 1724, 1726, 1728: evaluate and identify ineffective policy; column 2, line

15-43; implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 14, lines 51-59: specific sets of rules for analyzing specific information from selected network elements).

k. Regarding claim 18, Natarajan shows wherein: the historical data includes attribute values for attributes of each video conference and an outcome value representing an outcome for each video conference (column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level; column 29, line 37-column 30, line 33: video conference application); the modeling algorithm uses the outcome values as categorical attributes (column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level); and the modeling algorithm uses the attribute values as non-categorical attributes (column 2, line 15-22: implementing a feedback-based data network to automatically and dynamically monitor characteristics of various aspects of the network and adapt to changing network conditions by modifying selected network parameters in order to achieve a desired performance level).

l. Regarding claim 19, Natarajan and Evan shows obtaining historical data for multiple video conferences as per claim 1; building a training data for multiple video conferences and executing the modeling algorithms as per claim 7. Natarajan has particularly shown (column 6, lines 49-65) provide a network model to accommodate multi-variable nature of networks and implement a control scheme to collected network element information for management and control decision at network element level; column 29, line 37-column 30, line 33: video conference application. Weisman shows (column 42, lines 42-46) using UPnP to implement logical device for discovery, description, control, event management and presentation; and (column 43, lines 33-37) UPnP description includes vendor-specific information like model and manufacture information.

Together Natarajan, Weisman and Evans disclosed all limitations of claims 3, 7-10, 15 and 17-19. Claims 3, 7-10, 15 and 17-19 are rejected under 35 U.S.C. 103(a).

Response to Arguments

9. Applicant's arguments filed on 02/07/2008 have been fully considered, but they are not persuasive.

a. Applicant has amended independent claims 1, 11 and 20 with the limitations of dependent claims 2 and 4. Examiner has reviewed the claim 1-2, 4, 11 and 20 rejections and applied prior art as per Office Action dated 11/13/2007 with respect to the current amended limitations in the context of claim 1 as whole. Examiner has searched and found the previous applied prior arts, i.e. Natarajan and Weisman, are still applicable to the current claim set. Examiner has updated the claim rejections as above to reflect the current claim changes.

b. Applicant has argued that Natarajan does not disclose or suggest analyzing "historical data for multiple video conferences" as per claim 1. Natarajan shows in Abstract a feedback-based adaptive network (Fig. 2) wherein network elements report operating information relating to network conditions to a centralized data store; a policy engine analyzes the information for computing updated control information; the updated control information is fed back to network elements to affect the operation of network elements; the new or changed network element information is reported to the data store; the policy engine generates new or updated control information to affect the operation of network elements; the dynamic and automatic feedback control of network elements is provided to allow the network to adapt to changing conditions; events relating to changing conditions in the network may be reported using an event notification system; additionally the adaptive feedback-based network may include a

network quality monitoring system for evaluating performance characteristics or other aspects of the network based upon predetermined standards or criteria; and if a particular characteristic of the network does not conform with the standards for a characteristic of the network, the policy engine may automatically modify and affect the network performance.

c. Applicant has argued that Natarajan does not disclose or suggest analyzing "conducting a new video conference with the video conferencing network configured to avoid at least one of the identified characteristics associated with undesirable outcomes" as per claim 1. Natarajan has shown in column 33, lines 34-43 that the frame relay policy monitors packets drops on links of the network and adjusts or modifies parameters on links in response to changing network conditions, i.e. configured to avoid at least one of the identified characteristics associated with undesirable outcomes. Natarajan has also shown in column 29, line 59-column 30, line 3 that the feedback-based network adapts to changing conditions in the network as a video conference is initiated. Thus the feedback-based frame relay network per Natarajan seems to adjust in response to changing conditions before, during and after a video conference service.

d. It is the Examiner's position that Applicant has not submitted claims drawn to limitations, which define the method, program and system of Applicant's disclosed invention in manner, which distinguishes over the applied prior arts. It is the Examiner's position that the detailed functionality that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail

how these features of applicant's specification are unique (see items a-d in section 7). Natarajan has shown the general art of monitoring and managing multiple communication applications as provided by multiple vendors. It is clear that Applicant must be able to submit claim language to distinguish over the prior arts used in the above rejection sections that discloses distinctive features of Applicant's claimed invention. It is suggested that Applicant compare the original specification and claim language with the cited prior art used in the rejection section above or the Remark section below to draw an amended claim set to further the prosecution.

e. Failure for Applicant to narrow the definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant's intent to broaden claimed invention. Examiner interprets the claim language in a scope parallel to the Applicant in the response. Examiner reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

Remarks

10. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

a. Hales et al. (US 6288739 B1) Distributed video communications system

b. Yates et al. (US 6330586 B1) Reconfigurable service provision via a communication network

c. Grabelsky et al. (US 6678250 B1) Method and system for monitoring and management of the performance of real-time networks

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Conclusion

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the statu9s of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/P. A. S./
Examiner, Art Unit 2144
/William C. Vaughn, Jr./
Supervisory Patent Examiner, Art Unit 2144